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## AFRICAN HYLAEINE BEES

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The bees recorded below are those from the Cockerell–Mackie–Ogilvie Expedition of 1931–1932 (except those already reported in Ann. Mag. Nat. Hist., Aug., 1932), and a series received from Dr. J. Bequaert. The holotypes will be found in The American Museum of Natural History. I have followed Bridwell (Proc. Hawaiian Ent. Soc., June, 1919) in recognizing the genera *Nothylaeus* and *Metylaeus*. It also seems correct to place the African *Hylaeus* (south of the Sahara) in a distinct subgenus *Deranchylaeus* Bridwell. Certainly they form a group apart from those of other regions.

I have been somewhat in doubt as to whether the name *Prosopis* should not be preferred to *Hylaeus*. Technically, *Hylaeus* is valid, and to save *Prosopis* it would have to be made a nomen conservandum. This does not seem imperative, since Foerster's great Monograph (1871) uses *Hylaeus*, and Meade-Waldo, in the 'Genera Insectorum' (1923) does the same. Hence it cannot be claimed that *Prosopis* has been in universal use.

### **Hylaeus abjunctus,** new species

MALE.—Length about 5 mm., anterior wing 4; black, moderately robust; face below antennae white (a faintly brownish white); supraclypeal mark short and transverse, the upper margin irregular; lateral face-marks ending on inner side at level of top of clypeus, rapidly narrowing to orbits, the upper portion slender; labrum and mandibles black; scape strongly swollen apically, pyriform (as Alfken describes for male *H. atriceps*, the description believed by Bridwell to be based on *H. curvicarinatus*); flagellum red beneath; three delicate well-separated frontal keels; thorax wholly black; collar without a distinct band; mesothorax moderately shining, distinctly punctured, the punctures easily visible under a lens; scutellum shining, well punctured; area of metathorax minutely and densely covered with vermiform rugae, opaque as seen with a lens; tegulae dark brown, with a small light spot in front; wings hyaline, very faintly brownish apically; stigma reddish brown; nervures brown; first recurrent nervure a considerable distance from end of first cubital cell, second very near end of second cubital; legs black, the front tibiae with a broad pale stripe, hind tibiae all black, basitarsi largely white, small joints of tarsi dark; abdomen without hair-bands; first tergite closely and very distinctly punctured; venter unmodified.

Cape Town, April 4, 1920 (Michael Bequaert). Allied to the group of *H. curvicarinatus*, but easily known by the black hind tibiae, and other characters.

**Hylaeus absonulus,** new species

MALE.—Length about 5 mm.; black, rather robust, the first tergite swollen and transverse; face below antennae creamy white; the supraclypeal mark rather small, triangular, with the upper end obtuse, projecting very little above level of inner side of lateral marks; lateral face-marks rapidly narrowing above, ending on orbit, the margin of the light area of face above evenly rounded, a section of a circle; labrum and mandibles black; scape black, very broad at end; flagellum red beneath; mesothorax and scutellum very finely punctured, the punctures scarcely visible under a lens; area of metathorax with irregular moniliform rugae; tegulae with a light spot; wings dusky hyaline, stigma dark, nervures brown; first recurrent nervure joining first cubital cell a short distance from end, second a short distance from end of second cubital; femora black; front tibiae pale, almost white, in front light red on inner side; middle tibiae black, with a small white spot at base; hind tibiae broadly white at base; tarsi white, becoming rufous apically; abdomen stout, first tergite very finely punctured; traces of a slender hair-band at sides of first tergite, but none on the others; sternites not modified.

Cape Province: George, Nov. 4–7, 1931 (J. Ogilvie). Close to *H. tenuis dominae*, but considerably more robust, with broader face. The clypeus is very high and narrow. The frontal carinae are widely separated below.

**Hylaeus bequaertianus** Bridwell

Liberia: Du River, Camp No. 3 (J. Bequaert). One of each sex, the male with face-marks very pale yellow, the female with long pale lines along inner orbits.

Belgian Congo: Faradje, 29° 40′ E., 3° 40′ N. (J. Bequaert). Male, face-marks dull white. These agree with the supposed *H. ogilviei* Cockerell, which I recorded from near the Cassai River, Angola. A topotype male of *H. ogilviei* from Tshibinda has the lateral marks above with a narrower, finger-like, lobe. The female *H. ogilviei* lacks the stripes along inner orbits. *H. bequaertianus* was described from Nigeria. The males before me have darker tibiae (as in *H. ogilviei*) but must surely belong to the same species. It may be necessary to treat *H. ogilviei* as a high altitude subspecies of *H. bequaertianus*.

**Hylaeus graaffi,** new species

MALE.—At first appearing very near *H. sanctus*, but definitely distinct by the following characters: rather larger, with broader face; supraclypeal mark higher than broad; clypeus broader, its upper margin very little shorter than the width of a lateral mark at same level; flagellum conspicuously longer; tegulae with a large light spot;

abdomen much more robust, first tergite cup-shaped, strongly punctured (as seen under lens); second tergite strongly punctured, with the broad apical part shining, excessively minutely punctured (this at once separates it from *H. alfkeni*). Other characters are: face-marks very pale yellow; face strongly punctured; mandibles black, with the sharply bidentate end rufescent; labrum black, with long hairs; scape black, hardly swollen; flagellum very bright red beneath; frontal keels well separated, subparallel, slightly bent in middle; tubercles black; collar with a slender, inconspicuous line of whitish hair; mesothorax and scutellum strongly punctured; area of metathorax with fine plicae and two transverse keels, beyond the second keel is an irregularly sculptured area, and beyond this a minutely pitted space; wings quite clear, stigma and nervures very dark; first recurrent nervure joining first cubital cell a little before end, second meeting intercubitus; anterior tibiae light red in front, tarsi light red, with the basitarsi cream color; hind tibiae broadly white at base; suture between first and second tergites impressed; no abdominal bands. The inner margin of upward extension of lateral marks is very irregular, whereas in *H. vau* it is perfectly straight and even. *H. vau* has a shorter face, and the second tergite has a short, channel-like, apical depression, which is well defined right across.

Cape Province: Graaff-Reinet, October, 1931 (J. Ogilvie). Named after Colonel van DeGraaff, who founded Graaff-Reinet.

**Hylaeus immarginatus** (Alfken)

Cape Town, April 4, 1920, two females (Michael Bequaert). In one, the minute spot on apical part of clypeus is lacking. Alfken describes only the female, but Bridwell has described the male, which he collected at Cape Town. I have before me a male with the same data as the females, and also one from Mitchell's Pass, Ceres, Cape Province, Feb., 1932 (L. Ogilvie). The male has no supraclypeal mark, and the upper end of inner side of lateral marks does not go above level of top of clypeus; the first tergite is closely punctured.

**Hylaeus isochromus,** new species

MALE (type).—Length about 6 mm.; black, slender, with long narrow abdomen; head circular seen from in front, face rather broad for a male; labrum and mandibles clear red; face-marks cream color, including clypeus (which has a black line down each side, and also between its upper edge and supraclypeal mark), rather short supraclypeal mark with sloping sides, and narrow lateral face-marks, which are broadened at level of lower part of supraclypeal mark, but extend narrowly along orbits above level of antennae; antennae long, red, the flagellum dusky above; collar with a very slender whitish hair-band; tubercles margined with pale yellowish; mesothorax dull, very strongly punctured; scutellum with similar punctures, but more shining; area of metathorax dull and rugose; tegulae with a small light spot; wings brownish hyaline, darkest apically; stigma very dark, appearing black, nervures dark; first recurrent nervure ending some distance from end of first cubital cell, second at extreme apical corner of second cubital; legs dusky red, hind tibiae with a light spot at base, or hind tibiae may be nearly black throughout; abdomen shining, suture be-

tween first and second tergites impressed; a conspicuous patch of white hair at sides of margin of first tergite; punctures of abdomen excessively minute; apex showing a pair of little spines. In the other male the upper end of clypeus, and stripes part way down margin, are pale red.

FEMALE.—More robust, length about 6.4 mm.; legs black, the tarsi somewhat brownish, anterior tibiae bright red in front; second tergite as well as first with conspicuous white hair at sides. The labrum and mandibles are red; face reddish orange (probably reddened by cyanide to some extent), with no dark margins to clypeus; supraclypeal mark larger and higher, subquadrate.

Liberia: Memeh Town, Aug. 25–29, 1926, two males and a female (J. Bequaert). Peculiar for the similarly colored faces of the two sexes. By the scape being red in front, it is easily separated from *H. rhodognathus.*

**Hylaeus kasindensis,** new species

MALE.—Length about 5 mm.; very slender, black, the first abdominal segment, however, cup-shaped, with broad shoulders; head seen from in front subtriangular in outline; labrum and mandibles red, but the distinct malar space shining black; face below antennae yellow (reddened by cyanide in type); supraclypeal mark small and transverse, not going above level of inner side of lateral marks; lateral marks narrowing to a point on orbit a little above level of antennae; scape short, black, moderately swollen; flagellum long, bright red beneath; collar with a very slender hair-band, not conspicuous; tubercles black; mesothorax dull, scutellum more shining, both strongly punctured for such a small insect; area of metathorax with strong rugae, producing a cancellate effect; tegulae with a light spot; wings hyaline, faintly dusky; stigma large, dark brown, nervures pale; second cubital cell broad above; recurrent nervures received near the corners of cubital cells; legs black, with yellowish-white tarsi, the anterior tibiae pale in front (in the cotype the tarsi are pale red, with the hind basitarsi white); abdomen very slender, dark brownish or brownish black, excessively finely punctured, and without hair-bands or patches.

Belgian Congo: Kasindi to Beni, 29° 30′ E., 0° 30′ N., Aug., 1914, two males (J. Bequaert). Closely allied to *H. rhodognathus;* distinguished by the brownish abdomen, and short supraclypeal mark.

**Hylaeus perater,** new species

FEMALE (type).—Length, 6 mm., anterior wing 4; black, without light markings anywhere; flagellum entirely black (in Vumba specimen brownish beneath); clypeus dull, with weak punctures and no fovea; frontal keels well separated, strongly angulate in middle (style of *H. melanosoma*); collar with a very thin grayish-white hair-band; mesothorax dullish, strongly punctured, the median groove distinct, and running its whole length; scutellum convex, strongly punctured, shining anteriorly; area of metathorax dull and rugose; tegulae small and black; wings strongly brownish, stigma and nervures dark; basal nervure meeting nervulus in type (but in the other Tshibinda specimen, and the Vumba one, falling considerably short of it); first recurrent nervure some distance from end of first cubital cell, second ending at apical corner of second cubital; abdomen shining, rather broad, with a very faint

greenish tinge; first and second tergites with slender white hair-bands at sides; first tergite excessively minutely punctured.

MALE.—Similar but less robust, with narrower face (orbits strongly converging below); long black antennae; the scape swollen, almost globular, shining; clypeus longitudinally depressed in middle, in a strong side light appearing to have two obtuse longitudinal ridges; face and legs entirely black.

Belgian Congo: Tshibinda (type locality), two females, Aug. 27, 1931 (Alice Mackie, J. Ogilvie).

Southern Rhodesia: Vumba, Umtali, one of each sex, May 23–26 (J. Ogilvie). Easily known from *H. melanosoma* by the dark antennae and more dusky wings; and the black-faced male is very unusual, suggesting the European *H. cornutus* (Smith).

**Hylaeus perdensus,** new species

FEMALE.—Length about 5 mm., anterior wing 3.7; black, with no light marks on head or thorax, but flagellum bright red beneath; labrum not polished; clypeus dull, rather closely and strongly punctured on a minutely pitted surface; frontal keels very obtusely angled above the middle, and curved at upper end; collar with a slender line of white pubescence; mesothorax dull, very densely and coarsely punctured; scutellum shining, with separated punctures; area of metathorax irregularly plicatulate, much as in *H. sublucens;* tegulae with a large white spot, covering fully anterior half; wings hyaline, with a large dark reddish-brown stigma; first recurrent nervure joining first cubital cell some distance from end, second going to apical corner of second cubital; legs black, tarsi rufous at tips; abdomen dullish, with a sericeous surface, first tergite with well separated, very minute punctures, which do not occur on the second; margins of first tergites at sides with a fine line of white hair.

Southern Rhodesia: Matopo Hills, Oct. 1, 1931 (J. Ogilvie). Various black-faced females may be separated as follows:

1.—Flagellum dark, not red beneath (male also black-faced)..... *perater* Cockerell.
Flagellum bright red beneath.....2.
2.—Collar with a distinct though slender light hair-band; face entirely black.....3.
Collar with no hair-band; inner orbits marked with a pale line or spot.....4.
3.—Mesothorax somewhat shining the punctures distinctly separated.
*sublucens* Cockerell.
Mesothorax entirely dull, very densely punctured..... *perdensus* Cockerell.
4.—Mesothorax more coarsely punctured, the punctures distinctly visible under a lens; a long pale line along inner orbits..... *bequaertianus* Bridwell.
Mesothorax very finely punctured; a punctiform light spot near inner orbits.
*punctiferus* Cockerell.

Compared with *H. melanosoma, H. perdensus* has a much narrower, more parallel-sided thorax, and is smaller. It is, however, larger than the very minute *H. atriceps* Friese, a female of which, from Shilouvane, Transvaal, was examined in the American Museum. *H. atriceps* has the flagellum red beneath except at base.

**Hylaeus promontorii** (Meade-Waldo)

Transvaal: Louis Trichardt, April 4–10, 1932, four males (J. Ogilvie). In these specimens the scape, instead of being all black, has a little red spot at end. This is *Prosopis longula* Friese, 1913. The name was preoccupied, and Meade-Waldo changed it to *H. promontorii*, an unfortunate designation for an insect described from Bulawayo, Southern Rhodesia.

**Hylaeus punctiferus,** new species

FEMALE.—Length about 5 mm.; robust, black, with no light marks on head or thorax except a very minute spot near inner orbit on each side; mandibles stout, bidentate; labrum with a median pit bounded by a ridge on each side; clypeus ordinary (with no fossa), microscopically lineolate, with scattered minute punctures; no suture between clypeus and supraclypeal area; frontal keels very obtusely angulate in middle; scape black, not swollen; flagellum bright red beneath; mesothorax and scutellum dull, closely punctured on a roughened surface; area of metathorax rather shining, with weak irregular plicae, crossed by a ridge very near base, and by another toward the apex, the triangular area beyond the second ridge densely covered with excessively minute punctures (only seen under microscope); tegulae black, sparsely punctured; wings hyaline, stigma black, nervures dark; recurrent nervures received equally distant from ends of first and second cubital cells; legs black; abdomen broad, shining, without hair-bands or patches; first tergite broad, with excessively minute scattered punctures on a microscopically lineolate surface.

Natal: Durban, Oct. 14–18, 1931 (J. Ogilvie). The face is narrower than in *H. melanosoma.* The finely punctured mesothorax distinguishes it from *H. bequaertianus.*

**Hylaeus reditus,** new species

FEMALE.—Like *H. lightfooti* Bridwell, with the same deep shining pit on clypeus. I at first thought it was the same, but it is easily distinguished by the excessively finely and closely punctured first tergite, the pale grayish (not brownish) wings, and the entirely dull sides of metathorax. Face black, with very small pale marks near middle of anterior orbits; flagellum red beneath; tegulae with a light spot; posterior truncation of thorax not sharply defined at sides. In Bridwell's key it goes to *H. lightfooti*, except for the fine punctures of first tergite. In Friese's key it runs out, having collar and tubercles all black, and being less than 6 mm. long.

Natal: National Park, March 3–15, 1932 (A. Mackie, L. Ogilvie). Three specimens. A female from Lady Grey, Cape Province, Feb. 13, 1925, is somewhat smaller. It was from a series labelled *H. atriceps* Friese in the British Museum, but it is larger than that species, and has the characteristic clypeal pit. The type is from Natal. I have thought it possible that this might be the female of *H. tenuis dominae*, but I have no proof that this is the case.

**Hylaeus rhodognathus,** new species

MALE.—Length about 4.5 mm., anterior wings about 3; black, slender, with a long narrow abdomen, the first tergite broadly campanulate; head broad, but face rather narrow; labrum and mandibles bright red; face below antennae creamy white, the upper edge of the light color forming a section of a circle, interrupted by the projecting rounded upper end of supraclypeal mark; lateral marks ending acutely on orbital margin at about level of antennae; scape short and thick, entirely black; flagellum very long, reaching scutellum, brown above, bright red beneath; collar with a slender white fringe, tubercles black, tegulae with a large light spot; mesothorax closely punctured, coarsely for such a small insect, the three impressed lines on anterior part very distinct; scutellum shining and strongly punctured; suture between mesothorax and scutellum strongly depressed; area of metathorax shining, in strong contrast with the dull postscutellum; wings clear hyaline, with dark brown stigma, nervures brown; first recurrent nervure reaching extreme apical corner of first cubital cell, second meeting outer intercubitus; legs black, the front tibiae red with a yellowish stripe, the hind tibiae with a large white spot at base; tarsi light red, the hind basitarsi white on outer side; abdomen moderately shining, very finely punctured, without hair-bands; venter simple. There is a frontal groove, and the frontal keels between the antennae are well separated, strongly angulate about the middle, of the same general type as in *H. melanosoma* Cockerell.

Belgian Congo: south of Bukavu, Aug. 28, 1931 (L. Ogilvie). Resembles *H. curvicarinatus* (Cameron), but has a much paler face, and red labrum and mandibles. The abdomen is longer and narrower.

**Hylaeus sanctus,** new species

MALE.—Length not quite 4 mm.; black, slender, with long narrow abdomen, the first segment campanulate; orbits strongly converging below; labrum, mandibles and tubercles black; face below antennae very pale yellow, the upper edge of the light color forming a small section of a circle, slightly interrupted by the protruding supraclypeal mark, which is about as broad as long, and rounded above; the lateral marks end acutely on orbital margin at about level of antennae; the upper margins of supraclypeal and lateral marks are irregular; scape black, pyriform; flagellum bright red beneath; frontal keels obtusely angulate in middle; mesothorax and scutellum with fine punctures, but rather coarse for such a small insect, those on mesothorax running more or less in rows; area of metathorax with delicate, regular, well-separated plicae, crossed by a ridge, the plicae more numerous above the ridge than below it; tegulae black; wings hyaline, faintly dusky, stigma dark brown, nervures brown; first recurrent nervure joining extreme apical corner of first cubital cell, second meeting intercubitus; legs black, the anterior tibiae rufous in front, hind tibiae with a small light spot at base, hind basitarsi white; abdomen without hair-bands or spots; first tergite (under a powerful binocular) shows a very minutely roughened surface, on which are widely scattered, excessively minute punctures.

Southern Rhodesia: Christmas Pass, Umtali, May 20–21, 1932 (Alice Mackie). I had to consider whether this could be a variety of *H. varians*, but the minute size and presence of a supraclypeal mark are sufficiently distinctive.

The following table compares this with a series of small males:

1.—Mandibles yellow; supraclypeal mark present, longer than broad; scape black, with a red spot at end.....*promontorii* Meade-Waldo.
Mandibles red.....2.
Mandibles black.....4.
2.—Scape red in front.....*isochromus* Cockerell.
Scape entirely black.....3.
3.—Supraclypeal mark going conspicuously above inner sides of lateral marks; abdomen intense black.....*rhodognathus* Cockerell.
Supraclypeal mark not going above inner sides of lateral marks; abdomen brown or brownish black; clypeus not so narrow as in *H. sanctus*, its upper margin not shorter than width of adjacent lateral marks at same level.
*kasindensis* Cockerell.
4.—Supraclypeal mark present; clypeus very narrow above, its upper margin much shorter than width of an adjacent lateral mark at same level.
*sanctus* Cockerell.
Supraclypeal mark absent.....5.
5.—Upper end of lateral marks obtuse, curving away from orbits; scape black, swollen.....*bequaertianus* Bridwell.
Upper end of lateral marks pointed, close to eye.....*varians* Cockerell.

**Hylaeus sublucens,** new species

FEMALE.—Length about 4.5 mm., anterior wing 3.5; black, moderately robust, with no light marks on head or thorax, but flagellum bright red beneath; mandibles stout; labrum smooth and highly polished; face broad, entirely dull, the clypeus sparsely punctured on a minutely lineolate and pitted surface; frontal keels widely separated, curved rather than angulate; mesothorax and scutellum finely punctured, the latter less densely, the surface moderately shining but not polished; median groove of mesothorax extending only half-way back, parapsidal grooves distinct; sides of postscutellum with erect finely plumose white hairs; area of metathorax with fine plicae, the plicate part separated by a transverse keel from the rugulose apical part; tegulae very dark brown; wings hyaline, with a large brown stigma; nervures reddish brown, the recurrents joining apical corners of the cubital cells; collar with a slender but evident line of white hair; legs black; abdomen shining, without hair-bands or patches; first tergite without evident punctures.

Transvaal: Louis Trichardt, April 4–10, 1932 (Alice Mackie). Near to *H. melanosoma*, but smaller, with much narrower clypeus. The frontal keels in *H. melanosoma* are decidedly angulate in middle.

**Hylaeus tenuis** (Alfken) variety **dominae,** new variety

According to Bridwell (but with some measure of doubt), *H. tenuis* is to be regarded as a synonym of *H. curvicarinatus* (Cameron). I have before me a male *H. curvicarinatus*, with frontal keels exactly as described by Cameron and large light spot on tegulae, taken at Graaff-Reinet by Mrs. Ogilvie. This is about 35 miles from Pearston, the type locality of *H. curvicarinatus*, and I feel sure it is that species. But the

male from Mossel Bay, received from the British Museum as *H. curvicarinatus*, is another species. It has entirely black tegulae, and the frontal keels are widely divergent, in the form of a broad V. This insect, collected by Turner, I will call **H. vau,** new species. These two agree in the coarsely punctured mesothorax, but I have another species, which I refer to *H. tenuis*, distinguished by the much more finely punctured mesothorax. The tegulae have small light spots, or none. This species comes from Lady Grey, Cape Province (R. J. Nel); males labelled *H. atriceps* (Friese), variety, and *H. robertianus* (Cameron), variety. Bridwell apparently had this as *H. curvicarinatus;* he expresses the opinion that *H. robertianus* is the same, and also *H. atriceps* as understood by Alfken and others, and *H. tenuis*, female, but perhaps not the male. The type locality of *H. tenuis* is Port Elizabeth, and the supraclypeal area is said to be black in the male. Bridwell states that bred series show that the supraclypeal mark is variable, and may be present or reduced to a narrow line along lower margin. My specimens, like Bridwell's, are fully 5 mm. long; Alfken says 4–4.25 mm. Thus there is a reasonable basis for regarding the Lady Grey form as a distinct variety (perhaps subspecies), and I name it variety *dominae.* The hair-bands at sides of tergites are weak and indistinct, contrary to Bridwell's account. The frontal keels are similar to those of *H. curvicarinatus.* The following table separates a number of very similar males, all having the supraclypeal mark present, and the scape and tubercles entirely black.

1.—Hind tibiae entirely black; face cream color; supraclypeal mark short, transverse; lateral face-marks slender above; scape greatly swollen, pyriform (Cape Town)..... *abjunctus* Cockerell.

Hind tibiae white at base; supraclypeal mark higher than broad; lateral face-marks broader above..... 2.

2.—Mesothorax coarsely punctured..... 3.

Mesothorax very finely punctured..... 4.

3.—Tegulae black; frontal keels widely diverging, close together at lower end; hind basitarsi white, with a red spot at extreme tip; wings quite clear; first recurrent nervure joining first cubital cell a moderate distance from end, second a little closer to end of second cubital cell; scutellum strongly and densely punctured like mesothorax; base of metathorax with coarse longitudinal plicae; first tergite very densely and strongly punctured; light parts of face sparsely and finely punctured; labrum, mandibles and lower margin of clypeus black. Length about 4 mm. (Mossel Bay)..... *vau,* n. sp.

Tegulae with a large yellow spot; first recurrent nervure at apical corner of first cubital cell, second meeting intercubitus; first tergite densely punctured (Graaff-Reinet)..... *curvicarinatus* (Cameron).

4.—Larger and more robust; face broader (George)..... *absonulus* Cockerell.

Smaller and less robust; face narrower (Lady Grey)... *tenuis dominae* Cockerell.

**Hylaeus tinctulus** Cockerell

The male was described as having the legs wholly black, but additional specimens from Tshibinda show the anterior tibiae with a yellowish-white stripe in front. These were collected Aug. 26 (A. Mackie, J. Ogilvie). One from Rutshuru, 1° 15′ S., 29° 30′ E., Sept., 1914 (J. Bequaert), has the clypeal mark higher, with even margin, and the anterior tibiae red in front. It appears to have been reddened by cyanide, and is certainly the same species.

In addition to the original female, I have ten specimens from Tshibinda, Aug. 22, 26, and 27 (J. Ogilvie, A. Mackie, W. P. Cockerell, T.D.A. Cockerell). Two females were taken by Dr. J. Bequaert on Mt. Ruwenzori, 0° 30′ N., 29° 50′ E., June 5, 1914, at 1400 m.

The female is easily known from *H. atriceps* Friese and *H. melanosoma* Cockerell by the submetallic abdomen, with first tergite campanulate. A female from Behungi, Uganda, April 4, 1927, is unusually robust, and may represent a distinct race. It was taken by Dr. J. Bequaert.

**Hylaeus tinctulus extensicornis,** new subspecies

FEMALE.—Face narrower below; flagellum longer; wings clear, not brownish.

Belgian Congo: Burunga, 1° 30′ S., 29° 18′ E. (J. Bequaert). Alt. 1800 m.

**Hylaeus varians,** new species

MALE.—Length about 5 mm., anterior wing 3.5; black, slender, with narrow parallel-sided abdomen; labrum, mandibles, tubercles and tegulae black; eyes swollen, orbits strongly converging below; clypeus long and narrow; clypeus and lateral marks creamy white, no supraclypeal mark; lateral marks on inner side going above level of clypeus, very broad, but rapidly narrowing to a point on orbit, the whole mark having the shape of a cocked hat; frontal keels angular in middle; scape swollen, black; flagellum bright red beneath; collar with no hair-band; mesothorax dull, finely punctured, scutellum more shining; area of metathorax with strong plicae; posterior truncation densely punctured; wings hyaline, faintly grayish; stigma dark brown, nervures paler; both recurrent nervures meeting intercubiti; legs mainly black, but anterior tibiae light red in front, hind basitarsi (but not small joints) white; abdomen dull, first tergite swollen, campanulate, excessively minutely punctured; no hair bands.

Variety *a*.—Hind tibiae broadly white at base.

Variety *b*.—Face with the light area distinctly yellow; lateral marks more extended above; hind tibiae with a white spot at base.

Variety *c*.—Face-marks creamy white, but a black band down each side of clypeus; margin of first tergite with a little stripe of white hair on each side; hind tibial spot minute.

Southern Rhodesia: Christmas Pass, Umtali, May 20–21, 1932, four males (Alice Mackie). At first I thought I had several species, but on

close study, they appear to be individual variations of one. The species is allied to *H. melanosoma*, but easily distinguished by the much broader lateral marks of face. *H. melanosoma* is nearest to the variety *c*.

**Metylaeus semlikiensis,** new species

FEMALE.—Length about 5 mm., anterior wing 4; black, the head entirely black, including mandibles and antennae; two transverse yellow marks on collar, separated by a distance equal to the length of one; large yellow spots on tubercles (these marks in type somewhat reddened by cyanide); tegulae narrow, dark brown; legs black. Face broad, clypeus dull and coarsely punctured, but there is a polished area involving upper end of clypeus and lower end of supraclypeal area; front dull and very densely punctured; mesothorax dull and densely, coarsely punctured, a little shining between punctures posteriorly; scutellum coarsely punctured, produced into a lamina on each side, and the posterior part with two transversely oval shining pits, separated by a keel; postscutellar spines thorn-like, curved and slender apically; area of metathorax very coarsely sculptured; posterior truncation dull, with a shining area at base; the margins of truncation sharply defined at sides and above, the lateral margins strongly angulate; wings hyaline, stigma reddish brown, nervures pale brown; second cubital cell very broad above; recurrent nervures received at apical corners of the cubital cells; first tergite very coarsely punctured, the following ones so finely that the punctures are barely visible under a lens; no hair-bands or spots; venter shining.

Belgian Congo: Kasonsero, Semliki Valley, Aug. 16, 1914 (J. Bequaert). Allied to *M. cribratus* Bridwell, from Nigeria, but differs by the black mandibles, lack of white hair-band on first tergite, and sharp curved postscutellar spines.

**Nothylaeus binotatus** (Alfken)

Natal: Durban, Oct. 14–18, 1931 (J. Ogilvie).

Belgian Congo (Katanga): La Panda, Oct. 2, 1920 (Michael Bequaert).

These are females. The species has a remarkably wide range. The three females before me can be separated thus:

1.—Tubercles with a yellow margin ..... Lobito Bay, Angola.
Tubercles all red (as Alfken describes for type) ..... 2.
2.—Wings faintly brownish; stigma dusky reddish ..... La Panda.
Wings grayish; stigma darker ..... Durban.

But they are certainly variations of one species.

Alfken's long and principal description is of a female taken by Brauns at Uitenhage, Cape Province; but he describes the male from "Kimberley Reefs, Rhodesia," collected by Arnold, and Windhoek, Southwest Africa. We should consider the female to be the holotype, were it not that Alfken definitely states that the Arnold specimen is the type. There is one specimen of this species in the Rhodesian Museum.

**Nothylaeus braunsi** variety **nigricans** (Friese)

Transvaal: Wonderboom, near Pretoria, October (J. Ogilvie). Female.

**Nothylaeus fortis,** new species

MALE.—Length about 9 mm., anterior wing 7.2; robust, black, without red on head, thorax or abdomen, except that the mandibles have the apical half dusky red; face below level of antennae bright lemon-yellow, with the lateral marks extending as a band which ends obtusely some distance up orbit, the whole lateral mark like a foot on tip-toe; supraclypeal mark large, hat-shaped, narrowing but broadly truncate above; labrum shining black; clypeus rugosely punctured, dullish, with a median depression in upper part, but the lower part swollen, the narrow apical margin dark red; antennae entirely black; tubercles, and an interrupted stripe on collar, bright yellow, but scutellum all black; mesothorax dull, very coarsely punctured; scutellum more shining, but well punctured; area of metathorax very coarsely rugosopunctate; sternum with dense white hair; tegulae chestnut-red; wings dilute fuliginous; stigma large, very dark reddish; nervures dark brown; basal nervure nearly reaching intercubitus; first recurrent nervure meeting intercubitus, or falling a little basad of it; legs very dark reddish; front legs with a pale yellow knee-spot, and tibiae clear red in front; abdomen with the punctures excessively minute, first tergite dull; sides of apical margin of first tergite with a broad band of appressed white hair; first sternite raised in middle, with a groove down the raised portion, apical margin deeply emarginate; middle of third sternite with a large transverse slightly arched callus.

Belgian Congo: type from Lubutu, 0° 40′ S., 26° 40′ E., Jan. 20, 1915. Also one from Walikale, 1° 25′ S., 28° E., Jan. 7, 1915. Both collected by Dr. J. Bequaert.

Related to *N. heraldicus*, which it resembles in the structure of the abdomen, but easily known by the lack of red, and the bright yellow markings.

**Nothylaeus heraldicus** (Smith)

Belgian Congo: Beni, 29° 30′ E., 0° 30′ N., May 1, 1914, female (J. Bequaert); Lubumbashi, Katanga, March 18, 1921, male (Michael Bequaert).

Southern Rhodesia: Matopo Hills, April, 1932 (J. Ogilvie). Male.

In its wide range this species varies. The specimens before me separate thus:

1.—Males.....2.
Females.....4.
2.—Larger; stigma light reddish; collar with an interrupted orange stripe. Umlaas Road, Natal.
Smaller; stigma dark brown.....3.
3.—Collar marked with orange.....Matopo Hills.
Collar red, without orange.....Lubumbashi.

4.—Large; stigma pale reddish with a dark margin; scutellum very coarsely punctured.....Greytown, Natal.
Stigma dark red or dark brown.....5.
5.—Clypeus flattened or almost-concave, its apical margin light red, and the sides suffused with red.....Durban, Natal.
Clypeus not thus flattened, rather more evidently punctured.....6.
6.—Apical corners of clypeus broadly dark (black and reddish); collar marked with yellow; wings brownish.....Stellenbosch, Cape Province.
Apical margin of clypeus dark red, most narrowly in middle; collar without yellow; wings clear.....Beni.

The species was described from a female, said to be from the Cape of Good Hope, having the clypeus marked as in the Greytown example. Strand's variety *rufipictus*, with the face-marks all red, may perhaps have been affected by cyanide. Cameron described the species as *Prosopis rubriplagiata*, from Dunbrody and Grahamstown, Cape Province.

**Nothylaeus heraldicus maculipes,** new subspecies

FEMALE.—Length about 7.7 mm.; light face-marks dull pale yellow, the supraclypeal mark very large and well developed; clypeus well punctured, not flattened, its apical corners broadly dark red, the red triangular areas meeting narrowly in the middle line; scape and base of flagellum red, but the rest of the flagellum mainly black, but reddened beneath; collar and tubercles red, without yellow; scutellum somewhat shining, with punctures running in transverse lines; wings hyaline, faintly grayish, with dark stigma and nervures, the stigma rather small; femora more or less dusky, the hind ones mainly black; hind tibiae very dark reddish, with nearly the basal half cream color; abdomen black, with the first tergite red at sides and base, and the apical tergite red.

Belgian Congo (Katanga): Tenke, July-Aug., 1931 (J. Ogilvie). Recognized by the marking of the hind legs and various other characters, which appear to indicate a valid subspecies.

**Nothylaeus junodi** (Friese)

Belgian Congo (Katanga): Lubumbashi, Dec. 23, 1920, and Jan. 15, 1921, males (Michael Bequaert). These have the wings suffused with brownish; face-marks, lemon-yellow. The American Museum has a male from Bulawayo, Southern Rhodesia. In Friese's table the male runs to *N. braunsi*, but is easily separated by the yellow marks on scutellum.

**Nothylaeus libericus,** new species

FEMALE.—Length about 6.5 mm., anterior wing about 5; black, robust, the simple acute mandibles chestnut red; face broad, the clypeus and supraclypeal area black, dull and densely punctured; triangular lateral face-marks pale dull yellow,

broad at level of top of clypeus, the upward and downward sloping sides about equally long; scape in front, and flagellum beneath, chestnut red; area between antennae elevated, coarsely punctured, bounded on each side by a keel; collar with a very thin and slender grayish-white hair-band, and faint traces of two yellowish spots; tubercles broadly pale yellow; mesothorax extremely coarsely punctured; scutellum immaculate, coarsely punctured in front, posteriorly bigibbous, the elevations shining; postscutellum large, triangular, swollen, shining, with a row of punctures at extreme base; base of metathorax with a shining channel crossed by rugae; posterior truncation dull, with a median sulcus; tegulae brown, with a small yellow spot in front; wings bronzy hyaline, stigma and nervures dark brown; first recurrent nervure joining first cubital cell some distance from apex; second recurrent meeting outer intercubitus; middle coxae with a light spot; femora brownish black; front tibiae swollen, shining light red in front; hind tibiae white at base, otherwise pure black (contrasting with the brownish femora); tarsi mainly black, rufous at end; abdomen robust, dullish, without evident sculpture as seen under a lens, first tergite with a transverse patch of dense clear white hair on each side.

Liberia: Memeh Town, Aug. 29, 1926 (J. Bequaert). Allied to *N. peringueyi* Bridwell, from Nigeria, but easily known by the black clypeus and structure of scutellum. There is some approach to Bridwell's subgenus *Anylaeus*.

**Nothylaeus umtalicus,** new species

MALE.—Length about 6.3 mm., anterior wing 5; black, without red on head, thorax or abdomen, except that the labrum and mandibles are red, the scape is red in front and the flagellum is very obscurely reddish beneath; face broad, dull, entirely bright orange below level of antennae; the supraclypeal mark orange, rather high, rounded above, with a keel at each side; lateral face-marks very broad at level of lower part of supraclypeal mark, but rapidly narrowing, the margin almost transverse, ending on orbit at about level of antennae; upper part of clypeus with a pair of longitudinal depressions; thorax without yellow marks; mesothorax dull, very coarsely punctured; scutellum shining between the punctures; area of metathorax triangular, sharply defined, coarsely rugose; tegulae small and black; wings strongly suffused with brown; stigma and nervures dark brown; basal nervure almost meeting nervulus; recurrent nervures meeting intercubiti; legs black, with the anterior tibiae chestnut red in front; abdomen black, first tergite with a short white marginal hair-band on each side; apex of second tergite strongly depressed, forming a broad shining channel; third sternite simple.

Southern Rhodesia: Christmas Pass, Umtali, May 20–21, 1932 (J. Ogilvie). Runs in Friese's table to *N. braunsi* (Alfken), which has a much paler face, and red legs. The face-markings are much as in *N. bevisi* (Cockerell), but that also has red legs.